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HT Dawn Matt
RECEIVED
APR - 3 2007
JLC
WASTE MANAGEMENT ADMINISTRATION

April 2, 2007

VIA HAND DELIVERY

Horacio Tablada
Director, Waste Management Administration
Maryland Department of the Environment
1800 Washington Blvd.
Baltimore, MD 21230

Dawn Lettman
Assistant City Solicitor
Baltimore City Law Department
101 City Hall
Baltimore, MD 21202

Matthew Zimmerman
Assistant Attorney General
Maryland Department of the Environment
1800 Washington Blvd.
Baltimore, MD 21230

Re: Swann Park

Dear HT, Matt, and Dawn:

As requested, enclosed are copies of documents from Honeywell's files that Michael discussed with you regarding Swann Park sampling. We hope these are helpful in assisting you in your efforts to locate any relevant documents in each of your respective files. Please provide us with copies of any relevant documents relating to Swann Park that you are able to locate.

By providing these documents, Honeywell does not waive any claim of privilege with respect to these or any other documents related to the subject matter contained in these documents.

Very truly yours,

Margaret Witherup Tindall

Enclosure

cc: Michael D. Daneker
Michael C. Powell

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4/2/2007

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Baltimore Plant
Agricultural Division
Allied Chemical Corporation
Swann Park Soil Sampling
February 25, 1976

Baltimore Plant
Agricultural Division
Allied Chemical Corporation
Swann Park Soil Sampling
February 25, 1976

CONFIDENTIAL & PRIVILEGED
PREPARED AT THE REQUEST OF COUNSEL

SAMPLING - SWANN PARK

I PURPOSE

As part of the definitional program designed to identify the environmental impact of the operations at the Baltimore Plant, soil sampling of Swann Park was undertaken. The sampling was planned to provide a representative profile of the entire Park area. Kepone and Arsenic were the parameters analyzed.

II SUMMARY OF RESULTS

All analysis have been completed for both Arsenic and Kepone at Baltimore Works. Certain samples were also analyzed at Hopewell, Virginia at the Chemical Plant of Fibers Division. Those results are also included.

We have no explanation for the high figure indicated at site #12 by Hopewell as both our surface and core samples indicate a much lower level. Not clear if deeper samples were taken

Results are summarized in the attached Table I.

Table IA indicates the Kepone results as determined by Hopewell.

Table II indicates averages as we move across the field from the plant.

III METHOD AND LOCATION OF SAMPLING

The sampling was done of February 25, 1976 between 8:30 A.M. and 12:30 P.M. During the period, the weather was clear, sunny and mild with a light breeze blowing out of the North-west. Samples were taken

from the surface. Maximum sampling depth was 1-2 inches. Extraneous fibrous material was removed. The samples were mixed and split into two portions. Baltimore Plant did the analyses for Arsenic on one-half and the remaining half was sent to the Fibers Division Laboratory, Hopewell, Virginia, for the Kepone analyses.

The attached Sketches "A" and "B" depict the samples locations in the Park with the distances between samping points and the sample results for each point being listed. The relationship of the Park area to the Plant is indicated. Sketch "A" gives the Kepone results and "B" the Arsenic.

IV ANALYTICAL METHODS

Methods used for soil sample preparation and analytical procedures for Arsenic and Kepone analyses are included in a separate procedure manual.

Prepared by: Original Signed E. F. Hawkins

E. F. Hawkins
Technical Supervisor
Baltimore Plant

Reviewed by: J. M. DeVoe

J. M. DeVoe
Environmental Coordinator

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TABLE I

Sample No.	Kepone (ppm)	As (ppm)	Sample No.	Kepone (ppm)	As (ppm)
1	15	6600	24	17	540
2	12	2340	25	16	1130
3	11	1390	26	12	824
4	9	416	27	10	62
5	10	1950	28	11	880
6	13	1480	29	11	26
7	15	1600	30	18	28
8	17	3060	31	3	42
9	9	220	32	1.5	54
10	21	620	33	2	56
11	16	1400	34	2	72
12	10	1300	35	3	426
13	25	1966	36	3	100
14	10	1346	37	4	12
15	6	700	38	5	70
16	6	177	39	6	160
17	4	280	40	5	150
18	4	210	41	6	132
19	22	804	42	25	80
20	16	356	43	4	40
21	16	300	44	2	176
22	15	1590	45	2.5	92
23	17	250			

TABLE IA

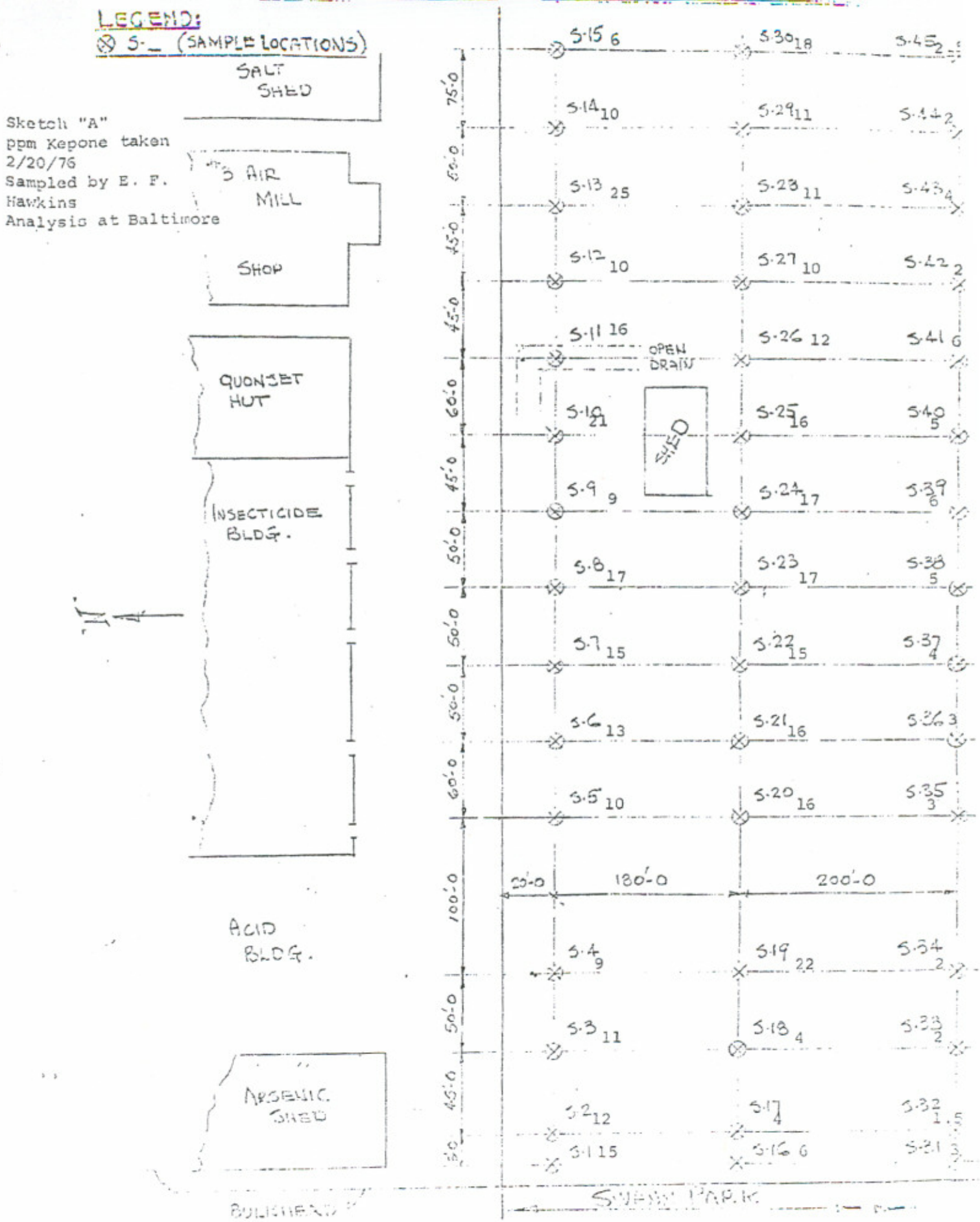
Sample No.	Kepone (ppm)	Sample No.	Kepone (ppm)
S-1		S-24	0.12
S-2	3.5	S-25	
S-3		S-26	1.5
S-4	0.14	S-27	
S-5		S-28	5.8
S-6	6.3	S-29	
S-7		S-30	0.16
S-8	41	S-31	
S-9		S-32	0.25
S-10	21	S-33	
S-11		S-34	0.32
S-12	930, 970	S-35	
S-13		S-36	0.50
S-14		S-37	
S-15	19	S-38	0.20
S-16	0.03	S-39	
S-17		S-40	0.50
S-18	1.1	S-41	
S-19		S-42	1.3
S-20	3.9	S-43	
S-21		S-44	2.1
S-22	2.5	S-45	
S-23			

TABLE II

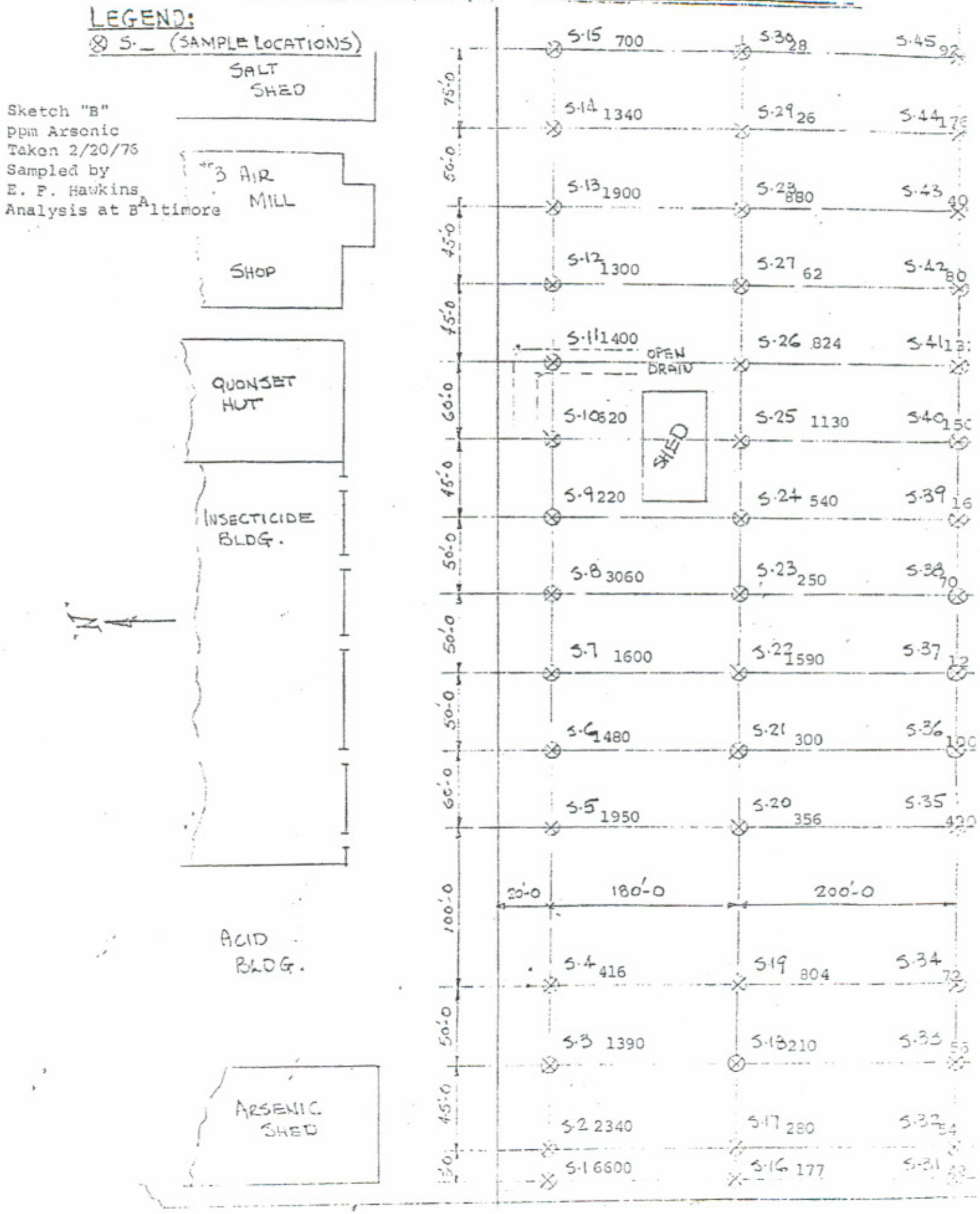
From these results Kepone and Arsenic results averaged as follows:

	Kepone (ppm)	Arsenic (ppm)
S-1 - S-15	13	1760
S-16 - S-30	13	497
S-31 - S-45	3.4	110

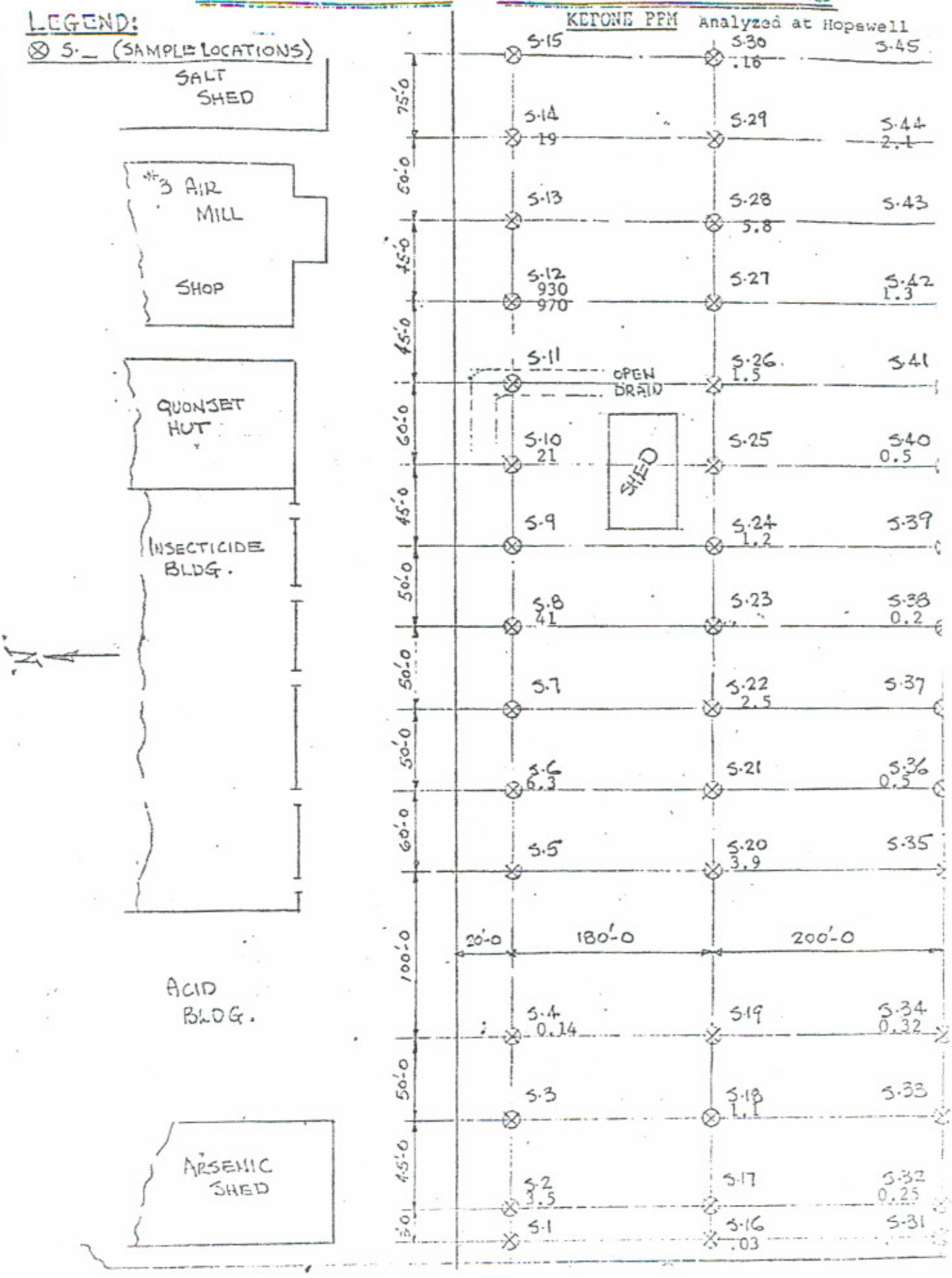
SWANN PARK · SAMPLE LOCATIONS



SWANN PARK · SAMPLE LOCATIONS



SWANN PARK · SAMPLE LOCATIONS



Baltimore Plant
Agricultural Division
Allied Chemical Corporation
Swann Park - Core Samples
Sampled 3/18/76

Baltimore Plant
Agricultural Division
Allied Chemical Corporation
Swann Park - Core Samples
Sampled 3/18/76

E. F. HAWKINS

Prepared by: _____
E. F. Hawkins
Technical Supervisor
Baltimore Plant - Agric. Div.

Reviewed by: J. M. DeVoe
J. M. DeVoe
Manager - Air & Water
Industrial Chemicals Division

PRIVILEGED AND CONFIDENTIAL
PREPARED ON THE ADVICE OF COUNSEL

Purpose

Allied Chemical sampled the core samples in Swann Park on March 18, 1976 in order to analyze them for Arsenic and Kepone to determine the penetration if any beneath the soil surface.

Results

The enclosed table shows the results of the analysis of the samples. The enclosed maps show the locations of these results.

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PREPARED ON THE ADVICE OF COUNSEL

SWANN PARK CORE SAMPLES
Taken by E.F. Hawkins
Taken 3/18/76

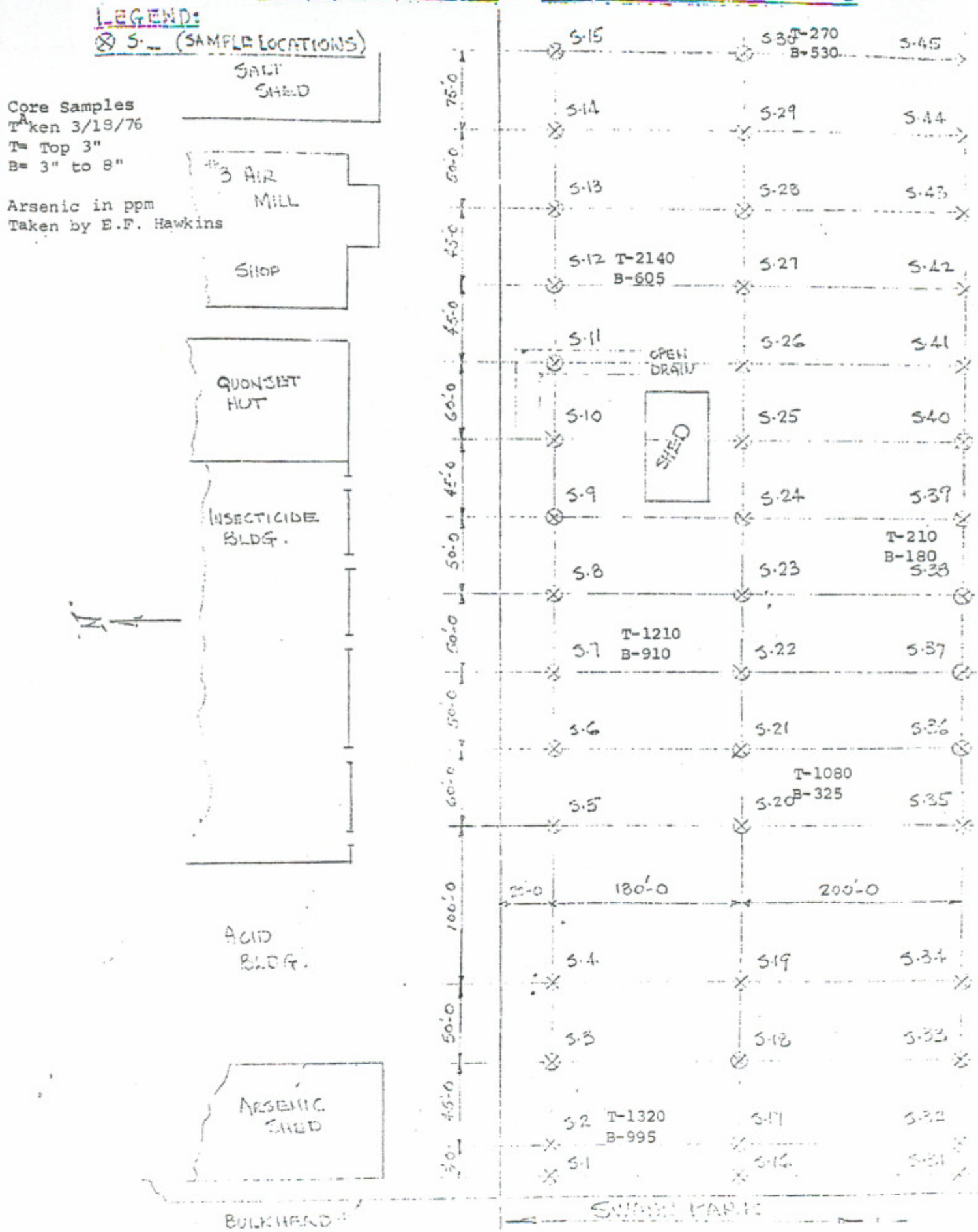
	ppm Kepone	ppm Arsenic
2T	11	1320
2B	11	995
7T	28	1210
7B	4	910
12T	13	2140
12B	6	605
20T	7	1080
20B	6	325
30T	5	270
30B	6	530
38T	7	210
38B	22	180

Samples taken at same locations as numbered on the general Swann Park map.

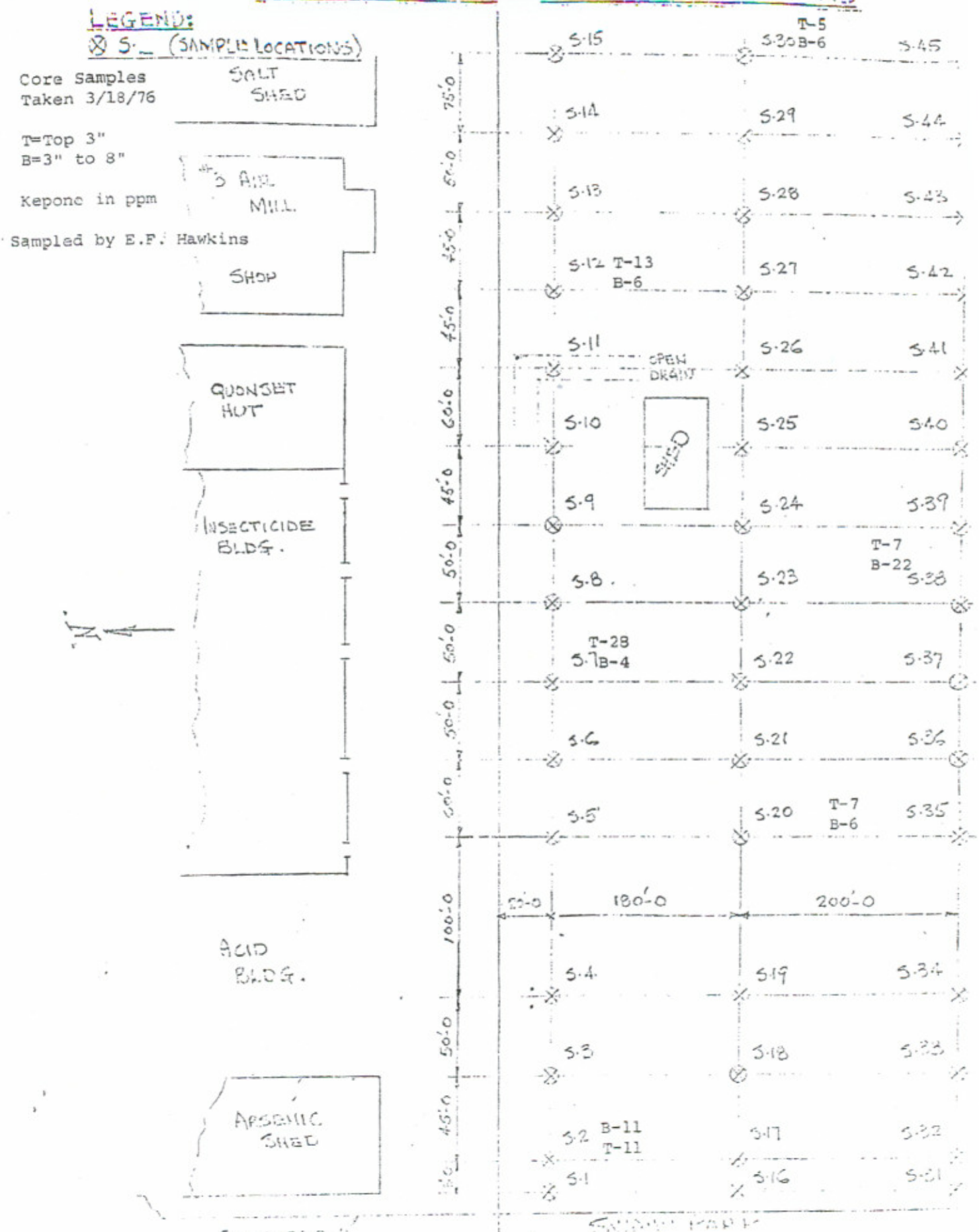
T samples - Top to 3 inches

B samples - From 3" to 8" depth

SWANN PARK - SAMPLE LOCATIONS



SWANN PARK - SAMPLE LOCATIONS



BALTIMORE PLANT
AGRICULTURAL DIVISION
ALLIED CHEMICAL CORPORATION
PLANT DUMP AREA SAMPLE
SAMPLED 3/18/76

Copy

Baltimore Plant
Agricultural Division
Allied Chemical Corporation
Plant Dump Area Sample
Sampled 3/18/76

Prepared by: Original Signed E. F. HAWKINS

E. F. Hawkins
Technical Supervisor
Baltimore Plant - Agric. Div.

Reviewed by: J. M. DeVoe

J. M. DeVoe
Manager - Air & Water
Industrial Chemicals Division

I Purpose

On March 18, 1976 the State of Maryland took a series of samples in the areas previously used as dumping areas in order to analyze them for possible pesticide contamination. Part of each of these samples was given to Allied Chemical Corporation for their analysis.

At the same time these samples were taken, two samples from Swann Park were also taken and portions of these samples were also given to Allied Chemical.

II Results

Table I attached shows the analytical results obtained from the samples. A portion of each sample was sent to our Research Laboratory in Morristown, New Jersey for further analysis. Their results have not as yet been received.

Table I

Samples taken 3/18/76 with State (Surface Samples)

Swann Park	Copper	Arsenic (ppm)	Chrome	Kepone (ppm)
P1	11	1100	21	3.5
P2	19	1340	16	2.9

Dump Area (all ppm)	Arsenic	Kepone	Copper	Chrome
D1 S	21,200	266	83	14
D2 S	6000	175	55	15
D2 C	28,400	10.8	62	12
D3 S	1900	42	22	12
D4 S	1300	17	83	17
D5 S	1700	9	580	14
D6 S	2200	11	30	9
D7 S	4200	8	315	10
D8 S	2500	12	89	11
D9 S	2000	32	188	12

III Method and Locations of Samples

The samples were taken by the State using a core sampler. In all locations except one (designated D-25 on the enclosed sketches), they were unable to penetrate the surface more than about one foot.

All results indicated are for approximately the top foot of ground surface except for D-25 which represents the soil in that area at a depth of about 1 to 3 feet.

Locations are indicated on enclosed sketches A thru E.

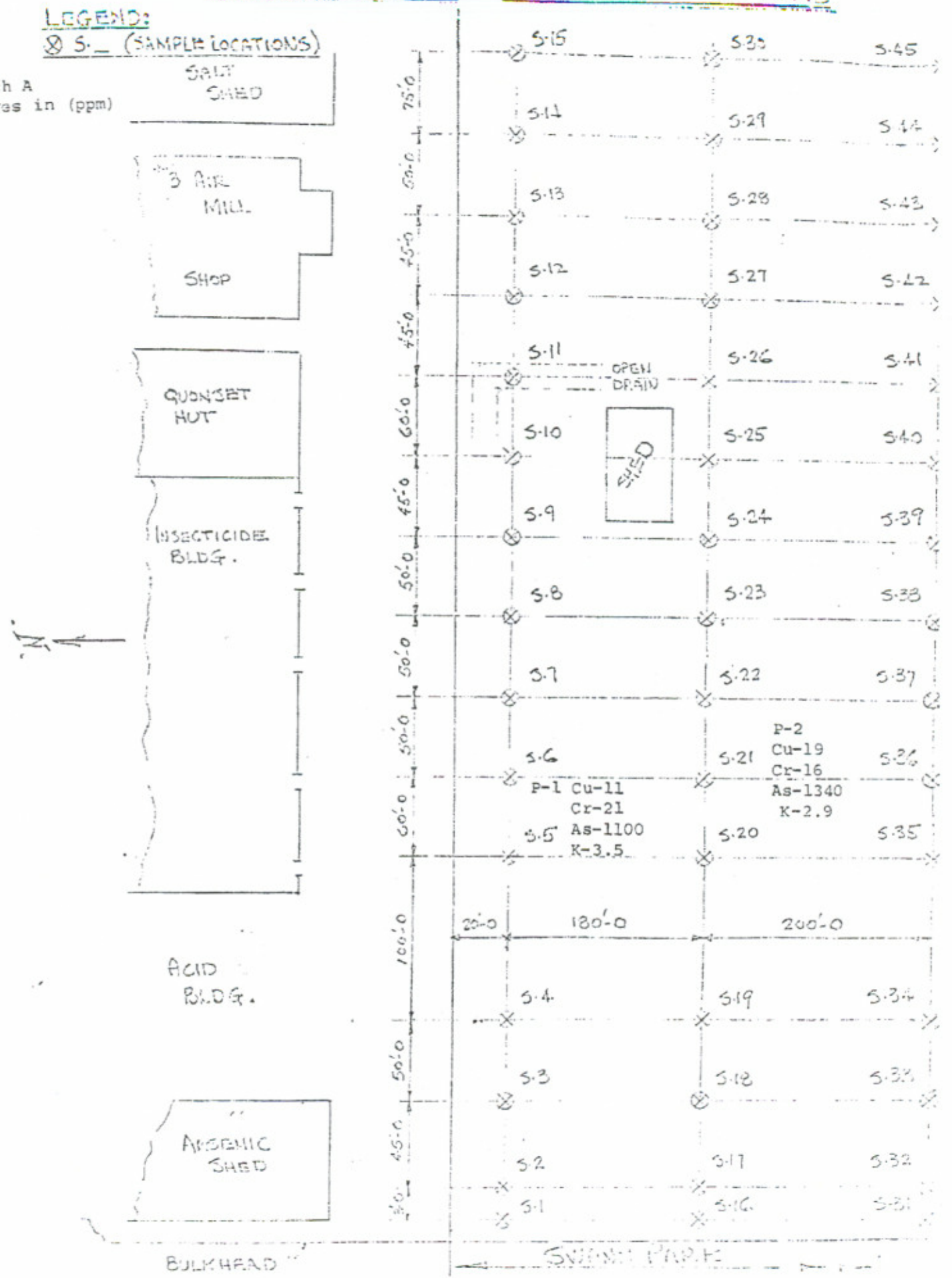
IV Analytical Methods

Analytical methods for all of the analyses are indicated in a separate manual entitled Method of Analysis.

SWANN PARK - SAMPLE LOCATIONS

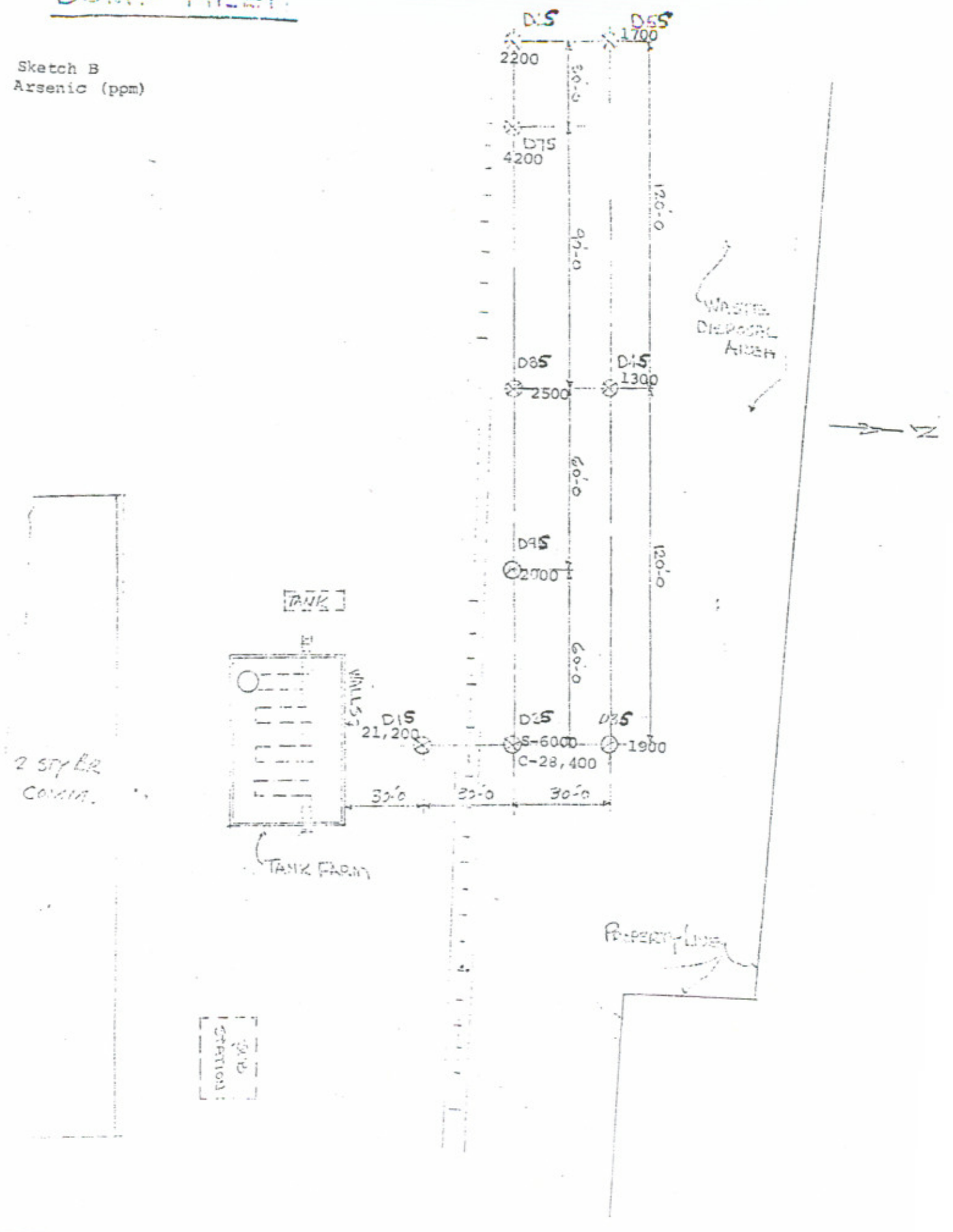
LEGEND:
⊗ S-_ (SAMPLE LOCATIONS)

Sketch A
Figures in (ppm)



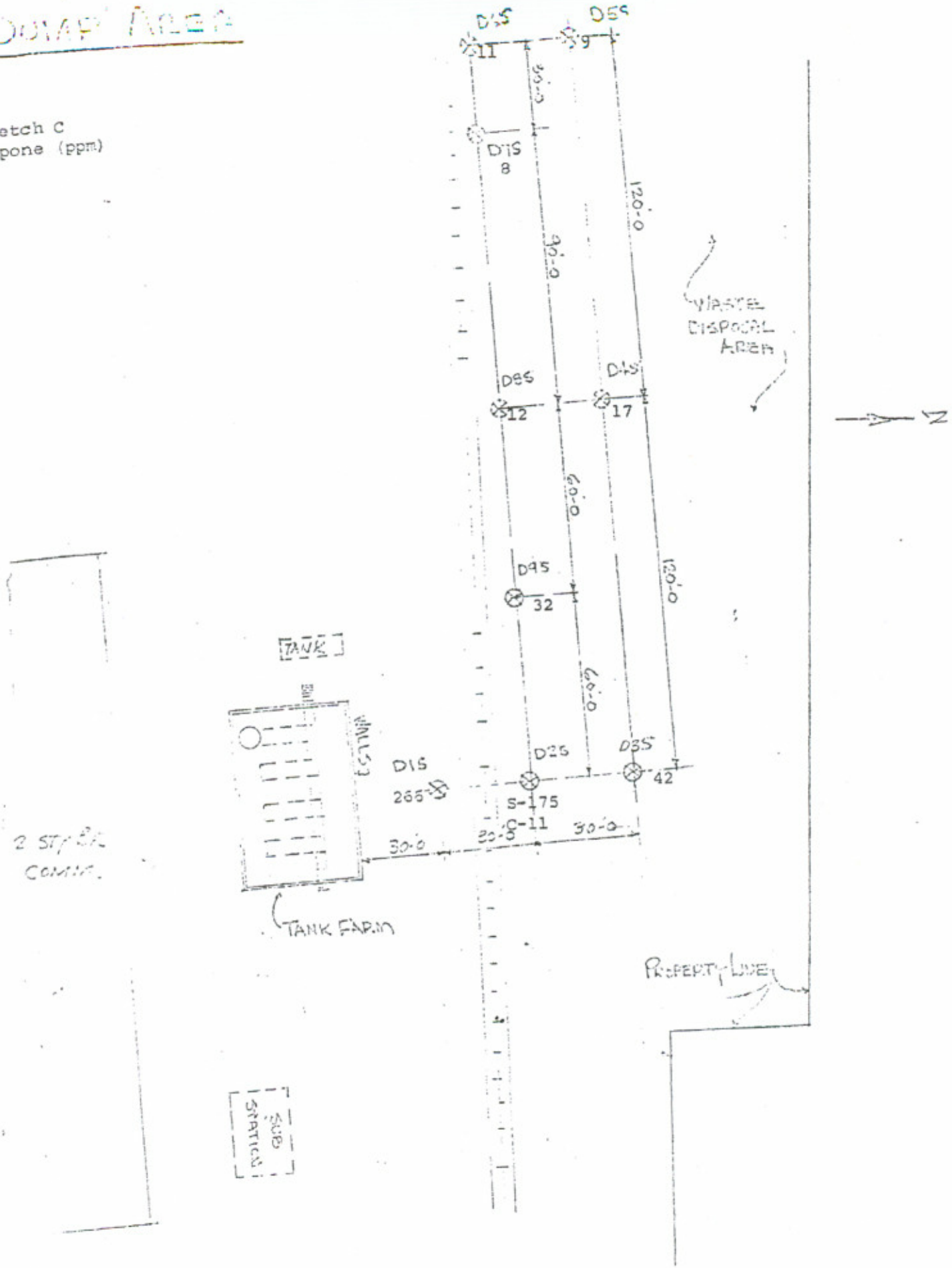
DUMP AREA

Sketch B
Arsenic (ppm)



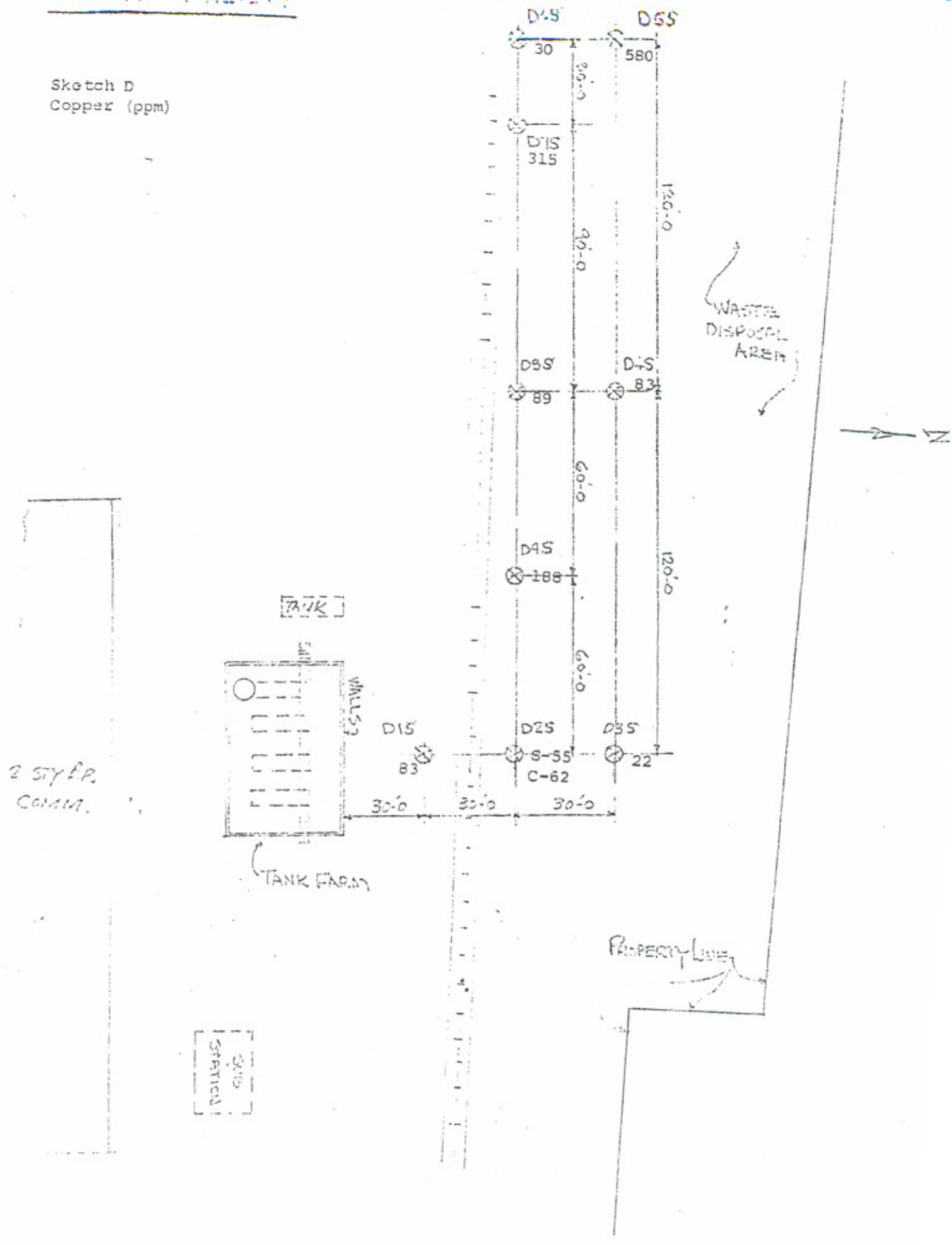
DUMP AREA

Sketch C
Kepone (ppm)



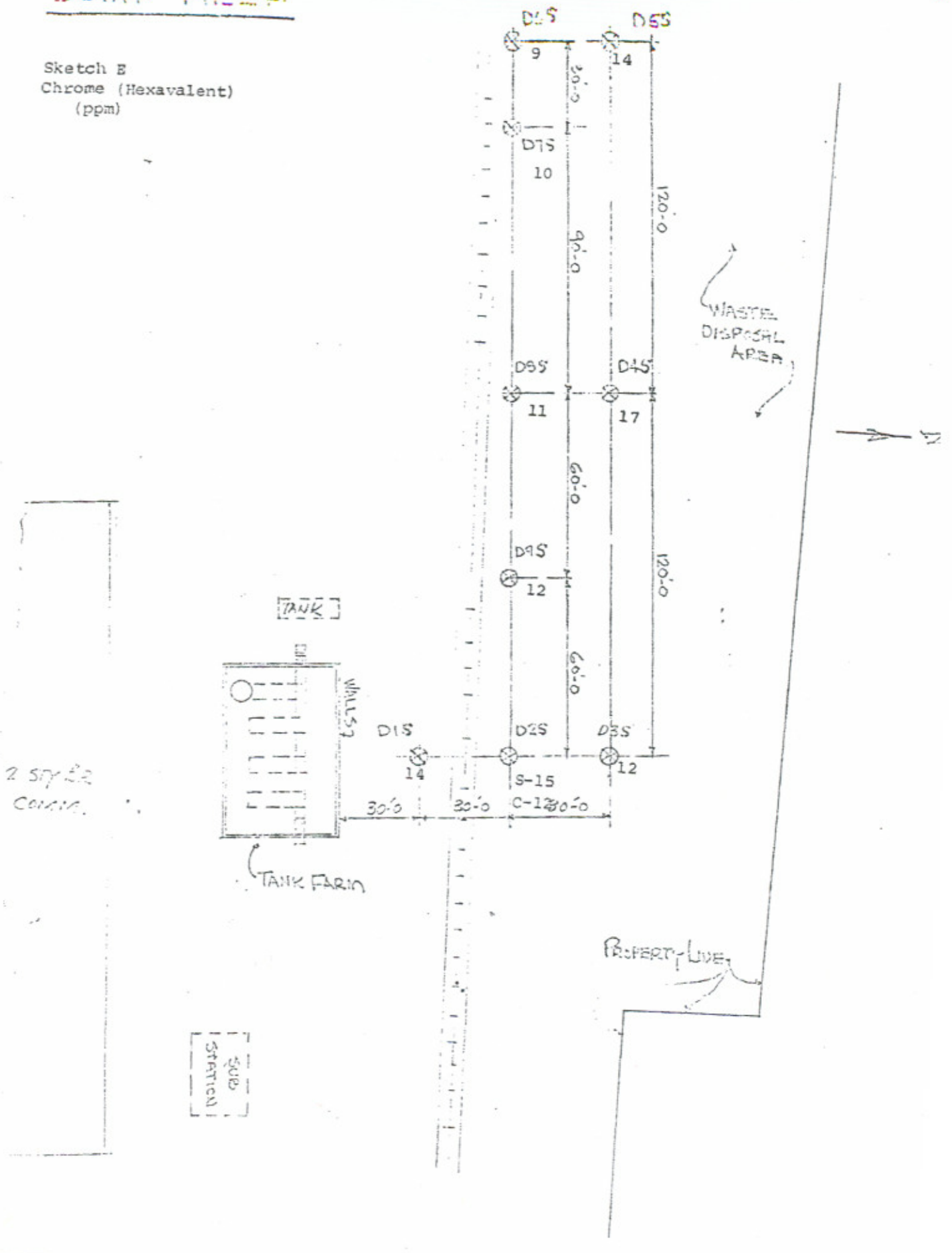
DUMP AREA

Sketch D
Copper (ppm)



DUMP AREA

Sketch E
Chrome (Hexavalent)
(ppm)



Baltimore Plant
Agricultural Division
Allied Chemical Corporation
Swann Park - Baseball Fields
Soil Sampling - 3/19/76 and 3/23/76

Baltimore Plant
Agricultural Division
Allied Chemical Corporation
Swaan Park - Baseball Fields
Soil Sampling - 3/19/76 and 3/23/76

Original Signed
E. F. HAWKINS

Prepared by: _____
E. F. Hawkins
Technical Supervisor
Baltimore Plant - Agric. Div.

Reviewed by: _____
J. M. DeVoe
Manager - Air & Water
Industrial Chemicals Division

Privileged & Confidential
Prepared at the Request of Counsel

I. Purpose

Allied Chemical sampled the surface of the soil of the Main Ball Diamond in Swann Park on March 19, 1976 in order to analyze for Arsenic and Kepone to supplement the definitional program which is underway to determine the environmental impact of the operation of the Baltimore Plant. The remaining three ball diamonds were included in the Swann Park sampling.

The State Department of Health and Mental Hygiene sampled each of the four diamonds at the bases and composited the samples from each diamond. The samples were shared with Allied.

II. Results

Table I attached shows the results of the analysis of the first group of samples, those taken by Allied representing the Main Ball Field.

Table II also attached shows Allied's analytical results on the composited samples taken in the four diamonds by the State Department of Health.

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Prepared at the Request of Counsel

TABLE I

MAIN BALL FIELD - SAMPLING 3/19/76

Sampling Location	Arsenic ppm	Kepone ppm
M 1st Base	20	1.2
M 2nd Base	18	0.9
M 3rd Base	24	1.7
M Home Plate	36	2.7
M Pitching Mound	22	2.4
M Infield Grass	138	1.7

The Arsenic result for the infield grass that is significantly higher than the values for the rest of the diamond was traced to the application of treating chemicals by the sod supplier. The infield was resodded by the Park Department last fall.

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TABLE II

SAMPLING FOUR BALL DIAMONDS - SWAAN PARK - COMPOSITED 3/23/76

Sampling Location	Arsenic ppm	Kepone ppm
S Main Field	52	4.0
S Field #1	30	1.1
S Field #2	24	2.1
S Field #3	144	2.3

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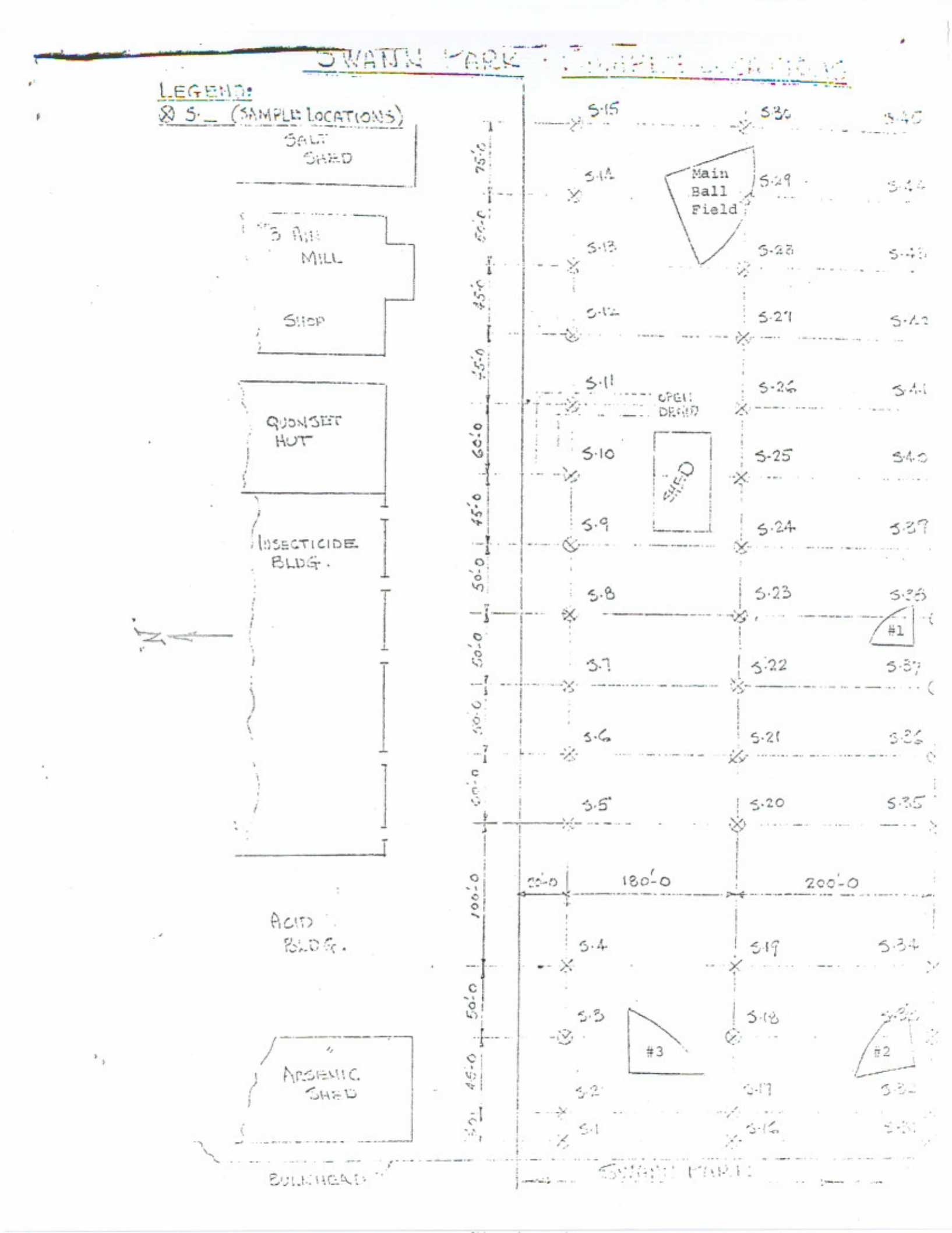
Prepared at the Request of Counsel

III Method and Location of Sampling

The March 19, 1976 samples taken by Allied were scooped from the surface with a one inch maximum penetration. The samples taken by the State on March 23 were taken in the same fashion. The sample locations are appropriately marked on the attached sketch. The State samples were composited for each diamond and after suitable mixing the samples were split between the State and Allied.

IV Analytical Methods

Analytical methods for all of the analyses are indicated in a separate manual entitled Method of Analysis. Both determinations were done at the Baltimore Plant.


SWANN PARK
LEGEND:
⊗ S-_ (SAMPLE LOCATIONS)
SALT SHED
SAW MILL
SHOP
QUONSET HUT
INSECTICIDE BLDG.
ACID BLDG.
ARSENIC SHED
Main Ball Field
OPEN DRAIN
SHED
#1
#2
#3
S-15
S-30
S-40
S-14
S-29
S-44
S-13
S-28
S-43
S-12
S-27
S-42
S-11
S-26
S-41
S-10
S-25
S-40
S-9
S-24
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S-8
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S-5
S-20
S-35
S-4
S-19
S-34
S-3
S-18
S-33
S-2
S-17
S-32
S-1
S-16
S-31
75'-0
60'-0
45'-0
45'-0
60'-0
45'-0
50'-0
50'-0
50'-0
100'-0
50'-0
45'-0
45'-0
20'-0
180'-0
200'-0
N
BULKHEAD
SWANN PARK

ALLIED CHEMICAL CORPORATION

MEMORANDUM

March 26, 1976

TO: A. J. von Frank

SUBJECT: State Kepone Task Force Meeting - March 24, 1976

The items of significance from subject meeting and an earlier meeting of the same date between Allied Chemical representatives (Fundersol and Reiter) and the Task Force Chairman follow:

1. The Task Force accepted Allied's proposal to underwrite restoration of Swann Park by the City of Baltimore and will include the proposal as a recommendation to the Governor. Methodology of restoration will be developed by the Task Force and the City. Allied Chemical will be advised of specifics in the near future.

2. Approval was granted by the Task Force for the cleaning of Kepone contaminated blending equipment. Prior notification to OSHA with identification of the cleaning program is required. Any waste material produced by the cleaning will be included in the existing waste inventory.

3. The Solid Waste Sub-committee was directed by the Task Force Chairman to expeditiously develop means for disposing of approximately 250 drums of Kepone containing waste material from the Baltimore site. (190 drums existing; 60 additional from plant decontamination)

4. The Task Force granted approval to Allied Chemical to install a clay cover on the plant dump site. Although recognized not as a final solution, the clay cover will prevent contamination of rain water run-off.

5. The State Department of Health report favorably indicated that no Kepone disease had been found among Allied's workers and that sampling of the Community to be initiated on March 27 is not expected to show any Kepone contamination.

6. Sampling of shellfish and crabs in the Chesapeake Bay indicate no problem level of Kepone. Sampling of Virginia and North Carolina crabs being packed in Maryland packing houses showed Kepone concentrations to be well below the FDA Action Level (0.4 ppm Kepone).

Summarized reports of the Task Force Sub-committees follow:

Health Effects

The Sub-committee has reviewed the concentration of Kepone in the blood serum of Allied Chemical plant workers which showed levels to be far below that experienced at Life Science Products. Samples taken from Allied Chemical workers in Sept. 1975 showed a mean Kepone level of 525 ppb. Samples collected in February 1976 showed that the blood serum content had decreased to a mean concentration of 239 ppb. The half life is estimated at 113 days. The Sub-committee compared these data to results from Virginia sampling which was done on blood*. In Virginia the mean for "cases" (demonstrated to have Kepone disease) was 8,480 ppb. The mean for "non-cases" was 1,570 ppb. The conclusion of the Sub-committee was that no acute Kepone disease was detected in Allied's Baltimore workers.

Samples (216) taken in the community around the Life Science Plant in Virginia showed that 19% had Kepone concentrations in the blood of 5-50 ppb. 81% of those sampled showed non-detectable levels. Of the 19% showing detectable Kepone, 85% lived within 1/4 mile of the plant. Thus, the amount of community exposure was small.

Based on the above, the Sub-committee does not expect to find any significant levels of Kepone in the neighbors immediately adjacent to the Baltimore plant. There are seven houses approximately 300 yards from the plant housing a total of 25 persons. The City will obtain blood samples on March 27. Questionnaires covering occupational exposure and contact with pesticides will be filled out. Blood analyses will be completed in 1½-2 weeks by the State laboratories. If any level of Kepone is detected, the community study will be extended. In addition to the neighbors, two baseball coaches and one ground keeper who frequented Swann Park will be checked.

Solid Waste

The Sub-committee has received chemical analyses of cores taken by the Highway Department from the Allied Chemical plant dump area. Data are under review.

Ten ground samples (9 surface and one to a depth of 3½-4 feet) were taken from the plant dump area on March 18, 1976. On the same day two sample cores (0-6" in depth) were taken from Swann

NOTE: *Serum concentration is normally two times that of whole blood.

Park approximately 50 feet south of the plant fence in line with the Quonset hut and the arsenic plant. No analytical data are available as yet. The Sub-committee requested that Allied analyze aliquots of the ten dump samples for arsenic, Kepone, total DDT, aldrin, dieldrin, para-nitrophenol, lead and mercury.

The Sub-committee recomended that Allied Chemical proceed with the installation of the clay cover over the dump area. This action was not to be construed as a final solution but as an interim step to prevent contamination of rain water run-off. The recommendation was accepted and approved by the Task Force. Allied received a letter of confirmation from the Task Force Chairman.

The Task Force Chairman requested that the Sub-committee examine and recommend methods for disposal of the Kepone-containing waste material presently at the Baltimore plant site, and that waste which will be generated by decontamination of plant equipment. Allied Chemical is to provide information as to the quantity and composition of waste generated by plant decontamination.

The Task Force approved, at Allied Chemical's request, the decontamination of the Kepone blending facilities (Small Air Mill, Miscellaneous Dust Plant and Pellet Plant). Allied stated that the cleaning would be on a dry basis followed by an aqueous wash. The cleaning procedure will follow OSHA requirements with notification to the Task Force and any required agencies prior to initiation of cleaning. Methods to be used would be made available to the Task Force.

Water Resources

The Department of Natural Resources reported on the migratory habits and life cycle of the blue crab. This information was provided to the Task Force as a guide in developing the aquatic life sample program to determine extent of Kepone contamination.

It was reported that all blue crabs spawn at the mouth of the James River over a period of 5-8 weeks. After spawning the larvae migrate north to a nursery area at the Maryland-Virginia State line and after development move northward throughout the Bay. Mating occurs primarily in the tributaries to the Bay. Males remain in the tributaries of north section of the Bay while the females migrate to the James River for spawning. The females do not move north again. Migration can easily cover several hundred miles.

The Department of Natural Resources, having a concern for the movement of Kepone into Maryland waters, sampled crabs starting at the Tangier Sound area adjacent to the Maryland-Virginia border, then moved north along the Eastern Shore and then south along

the Western Shore. Twelve areas were examined. None of the blue crabs approached the FDA Action Level of 0.4 ppm Kepone. In most cases, Kepone content was in the hundredths of a ppm. The two highest samples were taken at the mouth of the Patapsco River (Allied's plant is on this River) and contained approximately 0.1 ppm Kepone. Additional samples will be taken.

Most of the seed oysters planted in private oyster farms in the State are drawn from the James River in Virginia. Approximately 25 farms had received Virginia seed oysters. Analysis of samples taken from 23 farms showed Kepone concentrations in the area of 0.005 ppm. Two farms showed values that approached the 0.3 ppm FDA Action Level. These seed oysters had been brought from the James River in December, 1975. In all cases, the Maryland oysters will require another year before they reach normal size. Since adequate depuration occurs with the oysters, no problem is visualized.

The FDA representative to the Task Force stated that the Kepone Action Levels had been based on

1) the LD_{50} for Kepone,
2) the normal dietary pattern of humans, and
3) the levels of Kepone found in sampling that had been done in the James River.

No tolerance level has been set by FDA nor is one expected to be set, as this is considered a one-time affair. The FDA representative reported that catfish sampled in the James River were below the one-tenth ppm Kepone action level for fin fish. Shad are also below the action level. However, croaker and white perch have shown concentrations of approximately 1 ppm Kepone.

The Sub-committee also sampled crabmeat being prepared from Virginia and North Carolina crabs in packing houses in the State. In all cases, the Kepone concentrations were well below the FDA action level. The three samples of North Carolina crabs showed only trace concentrations of Kepone.

Sampling of fin fish in the Chesapeake is expected to continue. Sufficient data are not available as yet.

Ambient Air Quality

The Air Quality Sub-committee reported that sampling of the ambient air adjacent to the plant had been initiated on March 22. A high volume sampler had been placed on the Baltimore Gas & Electric property approximately one-third mile north of the plant and a second sampler has been located at an industrial site at Race and McComas Streets, approximately 200 yards southeast from the plant. A third sampler located at Simpsonville in a rural area

will provide background data. Sampling is to continue for a two-week period. The filter pads will be split with Allied Chemical for analyses.

Swann Park Proposal

Prior to the Task Force meeting, Messrs. J. Fundersol and the undersigned met with D. Noren, Task Force Chairman and Dr. Max Eisenberg, Task Force member, to submit Allied's offer to underwrite the City's restoration of Swann Park so that it can be opened to the public. Mr. Noren termed the offer as both generous and responsible. The undersigned provided a review of the proposal during the Task Force meeting at the Chairman's request. The Task Force accepted the proposal and will treat it as a recommendation to the Governor. Methodology of restoring the park will be worked out by the City of Baltimore and the Task Force; Allied Chemical will be advised.

Subsequent to the meeting, Mr. Frank Hoot, Assistant Commissioner of Health for the City of Baltimore, approached the undersigned and thanked Allied Chemical for a most generous offer. He advised that he would immediately approach the Mayor and recommend City support. He also stated he would instruct the Commissioner of Parks to hold down the cost as much as possible.

W. M. Reiter

WMR/nm
cc: J. W. Bratt
E. A. Cox
J. M. DeVoe
W. S. Ferguson
J. Flint
J. P. Fundersol
J. H. Hardage
T. D. Kent
J. Magliacco
R. F. Manning

ALLIED CHEMICAL CORPORATION

MEMORANDUM

April 19, 1976

TO: A. J. von Frank

SUBJECT: State Kepone Task Force Meeting - April 14, 1976

Items of significance from subject meeting and an earlier meeting of the Task Force Solid Waste Disposal Subcommittee attended by Allied Chemical representatives follow:

1. The Task Force has concluded that there are no significant health hazards existing in Swann Park and that the park can be re-opened by the City. Restoration is to be limited to a 100 foot wide strip parallel to the Allied Chemical plant. As a precaution, that area is to be plowed, disced, top soiled and sodded. The City has requested that Allied issue the contract. The work would be done using city specifications and supervision. Use of an outside contractor is needed to expedite the work due to unavailability of city personnel.

2. Installation of the clay cover on plant dump site was postponed at the request of the State Highway Administration. Alternate procedure to be evaluated is spray application of a bituminous cover.

3. In order to arrive at a permanent solution for the plant dump, an extensive hydro-geological evaluation of the area is to be conducted by the State with completion targeted for July 1976. The objective is identification of area hydrology and extent of ground water contamination. Allied Chemical was requested to install 6-7 sampling wells; however, objections were raised by Allied Chemical personnel. Availability of State drilling equipment is now being explored.

4. Neighbor sampling to determine blood Kepone content was shown no detectable levels, (detectable limit 10 ppb) yielding a conclusion of no need for further sampling. Allied Chemical has been requested to provide an industrial hygiene appraisal of problems arising from State highway construction in the plant dump area (installation of footings).

5. Ambient air sampling results have shown no problem relative to Kepone or arsenic. High volume samplers remain in position for use during plant demolition activities.

6. State sampling of aquatic life shows no problem with crabs or seed oysters. Yellow perch, which is a species which does not migrate into Virginia waters and thus would represent only contamination originating in Maryland waters, is showing Kepone levels above the FDA Action Level (0.1 ppm). Sampling of fin-fish is to be intensified. The more important fin-fish, blues and striped bass, have not commenced their runs and samples are not yet available.

Summarized report of the Task Force Subcommittees follows:

HEALTH EFFECTS

The Subcommittee reported that blood samples taken on March 27, 1976 from the neighbors located approximately 1/4 mile from the plant involved 12 local individuals, 4 coaches who frequented the park and 5 controls. No detectable Kepone was found in the blood serum. Test method sensitivity was 10 ppb. The Subcommittee concluded that there was no need for further testing.

SOLID WASTE

The Subcommittee reported that their review showed no significant health hazard existing in Swann Park. The analytical data on Kepone reported by Allied Chemical were in general agreement with data supplied by the EPA. There was some minor concern about the high levels of arsenic (1100 and 1300 ppm) found in two samples from approximately 50 feet from the plant fence. However, it was agreed that sampling had been sufficient and no further samples were required.

It was concluded that there was no need to do a complete refurbishing of the park, rather restoration is to be limited to a 100 foot strip running parallel to the plant. This is being restored as a precautionary measure. The area is to be plowed, disced, top soiled and sodded. The conclusion that no health hazard exists provides a basis for the City to re-open the park.

Review of Allied Chemical's proposal to install a 6" clay cover over the existing plant dump developed concern by the State Highway Department that the clay cover could interfere with future construction. The Highway Department recommended use of spray application of a bituminous coating be investigated since this would offer little problem to their construction. Allied Chemical will request Whitman, Requardt and Associates, local consultants, to prepare a proposal.

The Highway Department indicated that they expected to have bid documentation for the roadway drawn by July with contract advertisement in September. Construction work is expected to start in December 1976 with work progressing through the winter.

Relative to developing a permanent solution to the dump problem, the Subcommittee has been evaluating the hydrology of the area. They believe, based on core samples taken by the State Highway Department, that ground water is flowing through the dump area from the Baltimore

Gas and Electric site and into Swann Park before entering the river. There does not appear to be any impermeable layer of clay beneath the dump site. The first underlay is an organic-containing silt (clay-like in substance but permeable) followed by sand and gravel extending down to bedrock.

In order to identify hydrology and the pollutant impact on the area aquifer, the State expects to install 6-7 4" sampling wells to a depth of about 30 feet. The State requested Allied pay for the installation of wells; this was rejected by Allied representative. The State will investigate whether or not the Ground Water Division of the Water Resources Administration can drill the wells. If migration of contamination from the dump area is at a low level, the decision would be made to leave the dump site as is. However, if there is a high level, the Subcommittee recommendation will be relocation of the dump. Allied Chemical is proceeding to obtain the services of Geraghty & Miller, hydro-geological consultants.

The State Highway Administration asked for recommendations from Allied on the occupational health precautions to be taken in excavating 10-15 feet into the dump for placement of footings and piles. In this review, Allied will consider industrial hygiene and industrial waste problems that would be encountered. Such a procedure is wrought with problems.

The inventory of Kepone-containing material at Baltimore was up-dated by Allied Chemical due to a slight change that had recently occurred through the return of 25% Kepone mixture from a customer.

There are 14 drums of sweepings on site. Allied Chemical is to provide a list of estimated contents of these drums.

The alternate means available for disposal of the drummed waste that will be examined by the Subcommittee are:

a. incineration of organics,

b. encapsulation followed by landfill disposal,

c. mixing of contents with concrete or chemical fixations followed by landfill disposal,

d. out-of-state disposal -- Allied Chemical to explore this solution, which is doubtful.

AMBIENT AIR

Three high volume samplers were operated for 10 days beginning March 22, 1976. Analysis of the filter pads for arsenic and Kepone showed levels which would be considered satisfactory from a health standpoint. The high volume samplers located adjacent to the plant

will be kept in position so that they can be used during demolition. One of the samplers will be made a permanent station for monitoring emissions from the City waste pyrolysis unit located across the river.

WATER RESOURCES

Sampling of crabs has been completed. All the samples taken which covered areas from the Maryland/Virginia line north along the eastern and western shores are under the FDA Action Level for Kepone (0.4 ppm). Two samples out of the Patapsco River measured 0.23 and 0.11 ppm Kepone. All of the other samples were less than 0.1 ppm Kepone. Due to the season, it was necessary to dredge the crabs. Samples of river sediment taken with the crabs measured $<$0.1 ppm Kepone.

Testing of all seed oysters which came from the James River in Virginia has been completed. Of approximately 30 oyster beds sampled the mean level was 0.06 ppm Kepone. Only one sample exceeded the 0.3 ppm Kepone Action Level. Re-sampling confirmed this concentration. As a result, an order was issued to the owner to refrain from touching the oysters for a period of one year, during which time depuration is expected to lower the Kepone content. The order prevents harvest without approval of the State Environmental Health Administration which would be preceded by re-testing. These seed oysters had been shipped from Virginia during December 1975. The oyster bed is located in the West River at the mouth of Parish Creek. Natural oyster beds have also been sampled. No detectable Kepone was found.

Sampling of fin-fish is proceeding. Thus far, samples of yellow perch have exhibited concentrations greater than the FDA Action Level. Both white and yellow perch are non transients. They do not migrate to Virginia water and thus their Kepone content is indicative of the Maryland environment. This is not true for channel catfish, striped bass, croakers, spots and blue fish which are migratory and as such could be contaminated in Virginia water and then moved into Maryland waters. The Administration is to begin intensive sampling of all species with stress being placed on commercial species and those which have been found to contain high Kepone levels in the Virginia studies.

The yellow perch samples were taken from the Patapsco River. If the Kepone concentration is verified as greater than 0.1 ppm, restrictions on commercial and sport fishing could follow.

During the meeting, the FDA representative reported on sampling that had been performed in the Virginia area. The conclusion reached by the FDA is that the Kepone problem is being extended to fin-fish in the lower Chesapeake Bay. Data reviewed covered the following:

White Perch	0.1 ppm Kepone
Croakers	28 samples showed <0.1 ppm Kepone however, April samples showed significant increases in Kepone content over February sample.
Blue Fish	19 samples examined. Samples taken during January and February had very low Kepone concentration. March and April samples showing high level with 1 sample reaching 0.19 ppm.
Shad	Running very high Kepone content, greater than 10 ppm(?) (Governor closing James River to shad fishing)

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